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Huizinga, M.A., Optimized Environmental Stress Screening of U.S. Army Electronic Hardware, No. 1, p.50. *Describes the systems analysis techniques employed by the U.S. Army for the optimization of Environmental Stress Screening (ESS) considering inhouse manufacturing and field costs. Describes computer programs that enable engineers to recommend optimized ESS screens.* (CA Process Optimization; PR Stress Screening)

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Jackola, A.S., A Production Approach to Environmental Acceptance Testing of Space Vehicle Subsystems, No. 4, p. 26. *Describes Rockwell International's Multi-Environment Test System (METS) and its configuration and control system and summarizes its use to support black-box environmental test programs.* (CA Digital Data Measurement/Processing; DTE Solar and Space Simulation)

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King, J.G., The Roots of Federal Standard 209, No. 5, p. 37. *Summarizes the history of this document and invites further contributions to a historical perspective for future publications.* (CC Criteria and Standards, Clean Room Operation/Procedures)

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Kuehn, T.J., Computer Simulation of Airflow and Particle Transport in Cleanrooms, No. 5, p. 21. *Reviews existing airflow and particle transport simulation methods and recent applications to cleanroom airflow prediction. Discusses advantages of computer simulation over experimental measurements and limitations, and presents future directions of cleanroom modeling.* (CA Environmental Modeling/Analysis; CC Cleanroom Design/Materials)

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Lambert, R.G., Fatigue Damage Accumulation Prediction for Combined Sine and Random Stresses, No. 3, p. 53. *Details information on a case where the combined sine/random stresses are the result of a single degree-of-freedom (SDF) mechanical system responding at its resonant frequency to applied combined sinusoidal and wideband Gaussian random vibration forcing function inputs. Equations are presented and numerical examples are included.* (CA Environmental Modeling; DTE Shock and Vibration)

Lieberman, A. F., Calibrations Requirements and Methods for Liquid-Borne Particle Counters, No. 3, p. 34. *Describes present U.S. practices for calibrating optical liquid-borne particle counters (APCs), Instruments are described and calibration methods and their advantages and problems are presented.* (CC Criteria and Standards, Identification, Measurement, and Monitoring)

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Mahone, W., The Behavior of Outgassed Materials in Thermal Vacuums, No. 5, p. 28. *Discusses data from testing to investigate the relationship between outgassing and condensation for aerospace materials in space-like environments. Compares previous and current test data and discusses discrepancies.* (CC Sources and Effects; DTE Solar and Space Simulation)

Marshall, T.S., Thermal Environment Simulator for Vacuum Testing of Large Spacecraft, No. 1, p. 29. *Reports on the thermal environment simulator (TES) that has been developed for Martin Marietta's Space Simulation Laboratory.* (DTE Solar and Space Simulation)

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Okada, T., Study of Constant Airflow Rate and Constant Room Pressure Control Systems for Physical Containment Laboratories, No. 1, p. 56. *(Abstract—see Takahashi, A.)*

Osburn, C.M., The Effects of Contamination on Semiconductor Manufacturing Yield, No. 2, p. 45. *Demonstrates the challenges associated with controlling particulate and chemical contamination to achieve high semiconductor device yields with data showing the influence of cleanroom air, semiconductor processes, and tools, gases, chemical, and DI water.* (CC Cleanroom Operation/Procedures, Filters and Filtration, Sources and Effects; PR Criteria and Standards)

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Peck, R.D., The Proposed Revisions of Federal Standard 209B, No. 5, p. 43 (Reprinted from 1986). *Discusses revisions to the Standard.* (CC Cleanroom Design/Materials, Criteria and Standards, Identification and Measurement)

Periasamy, R., Particles in High Pressure Cylinder Gases: Gas to Particle Conversion During Expansion, No. 4, p. 20. *Formation of ultrafine particles by gas to particle conversion is hypothesized to explain the large concentration of ultrafine particles measured downstream of pressure reducing devices on cylinder gases of helium, nitrogen, and argon. Experiment data is described.* (CC Identification, Measurement, and Monitoring, Sources and Effects)

Peterson, T., Particle Deposition Onto a Flat Surface from a Point Particle Source, No. 6, p. 39. *(Abstract—see Stratmann, F)*

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Rubow, K.L., Characteristics of Ultra-High Efficiency Membrane Filters in Gas Applications, No. 3, p. 26. *Evaluates particle collection characteristics of ultra-high efficiency poly-vinylidene fluoride (PVDF) membrane filter media. Describes testing procedures and data obtained.* (CC Filters and Filtration, Identification, Measurement, and Monitoring)

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Spann, F.W., A Procedure for Comparing Dynamic Test Severities Based on Equipment Response Characteristics, No. 1, p. 62. *Presents a technique for tailoring dynamic environment tests based on equipment response characteristics. Explains the dynamic response theory and applies it to a procedure for comparing the relative severity of dynamic environmental tests.* (DTE Criteria and Standard, Shock and Vibration, Test Tailoring)

Smith, Maj. Gen. M.T., *Keynote Address, Annual Technical Meeting of the Institute of Environmental Sciences, King of Prussia, PA, May 3, 1988.* (PR Acquisition Policies)

Stratmann, F., Particle Deposition Onto a Flat Surface, No.6, p. 39. *Compares particle deposition patterns resulting from a uniform freestream concentration with deposition patterns from a narrow particle beam, and reports on two approaches that can be taken to avoid particle deposition.* (CC Sources and Effects)

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Takahashi, A., Study of Constant Airflow Rate and Constant Room Pressure Control Systems for Physical Containment Laboratories, No. 1, p.56. *Describes various control systems that can keep the room pressure and supply exhaust airflow rate at constant levels in "other rooms" of a highly airtight containment facility when the supply/exhaust airflow is shut off in one of the rooms for decontamination purposes.* (CA Environmental/Monitoring; CA Cleanroom Design Materials)

Talbott, Lt. Col. C. M., R&M 2000 Environmental Stress Screening, No.1, p. 17. *Discusses Environmental Stress Screening (ESS) as it relates to Air Force policy and also outlines a graphic technique for illustrating the effectiveness of ESS regimens based on field experience.* (DTE Criteria and Standard, Shock and Vibration: PR Acquisition Policies, Stress Screening, Criteria and Standard)

Toliver, R. D., Ice Is Ice?, No. 3, p. 31. *Describes the wide range of ice types that can occur in nature, explains the background of Method 521.0, describes the environmental conditions that are simulated by Method 521.0, and shows the need for expansion of 521.0 to include methods of testing for many other types of ice.* (DTE Climatics and Thermal, Criteria and Standards)

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Vibbart, C.M., Space Shuttle Solid Rocket Motor Testing for Return to Flight: Transient Test Article Test Program, No. 6, p. 17. *Describes the special test program and facility designed specifically to test and verify the sealing capability of the redesigned solid rocket motor's field, igniter, and nozzle joints. Discusses test effectiveness versus space vehicle flight performance and new aerospace test techniques.* (DTE Climatics and Thermal, Shock and Vibration, Test Tailoring)

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Wasserman, D.E., Human Occupational and Industrial Vibration, No. 1, p. 58. *Reports on the medical/epidemiological and engineering aspects of both whole-body and hand-arm occupational/industrial vibration. Current hand-arm and whole-body vibration standard are presented along with engineering control and work practice recommendations for minimizing worker exposure to vibration.* (DTE Shock and Vibration)

Woods, W.R., Experience, Problems, and Subtleties of Electrostatic Discharge at JPL. No. 6, p. 42. *Discusses experience with and approaches used at the Jet Propulsion Laboratory (JPL), California Institute of Technology, for the control of Electrostatic Discharge (ESD).* (CC Cleanroom Design/Materials, Criteria and Standards, Sources and Effects; DTE Solar and Space Simulation)

Wysockey, M., Great Lakes Shore Erosion, No. 3, p. 19. *Presents the problem of high water levels that cause increased shore erosion in the Great Lakes. Describes the pertinent hydrology and coastal morphology of the area and the three fundamental solution strategies being pursued.* (EE Environmental Planning Management)

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Yamamoto, T., Model Study for Optimization of Cleanroom Airflows, No. 6, p. 24. *Presents background on a menu-driven numerical simulation that was developed to model the airflow in a typical industrial process cleanroom and helps identify cleanroom designs that minimize the transport of particle contamination.* (CC Environmental Modeling/Analysis; CC Cleanroom Design/Materials)